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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OWENS CORNING
2790 COLUMBUS ROAD
GRANVILLE, OH 43023

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,026

Applicant(s)

MICHAEL, RAJENDRAN S.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 15-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 37/02
8/1/03
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-14 and 27-30, drawn to a liner product, classified in class 442, subclass 381.
 - II. Claims 15-26, drawn to a method of making, classified in class 264, subclass 239.
2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a molding process with predetermined compression regions.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Stephen Barns on July 28, 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-14 and 27-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "co-fiberized composite material" in claim 12 is unclear which renders the claim vague and indefinite. The specification on page 10, lines 5-6 seems to define "co-fiberized" as merely having mixed or entangled fibers. It is unclear if that is all the entire term means and how it is different from claim 1.

7. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims do not state the spatial relationship of the first, second and third portions. Are they in an adjacent relationship within the same layer? Are they in separate layers? Claim 14 claims a third fiber diameter, is the third diameter of larger or smaller than the first and second fibers?

8. Claim 29 recites the limitation "wherein the separate component" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-8, 11-12 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over BYMA (US 6,413,613 B1) in view of BAKHSHI et al. (US 5,736,475).

BYMA discloses a material and article for use as a headliner. The invention provides energy management and a degree of acoustic damping in order to reduce noise in the vehicle. Further, the reference teaches the use of an integrated structure. (Column 1, lines 18-42) BYMA teaches a material that is provided with zones or areas of differing resilience and/or compressibility and/or other physical properties within the structure of a one-piece element. (Column 4, lines 49-52) On Figure 3, the reference shows a finished cross section of the headliner 12 in which the thickness of the headliner 12 varies with thicker edge portions 26a, 26b. The thicker edge portions 26a, 26b provide increased energy management function of these regions. Also shows thinner sections 30. The reference also teaches that the thickness of the headliner 12 and variation in different regions is to be dictated by the particular requirements of the vehicle within which the headliner 12 is installed. The variation of the thickness of the headliner is produced by molding and the permanent deformation which both vary the energy management properties and capability of the various sections of the headliner. (Column 12, lines 8-53)

It is the Examiner interpretation that the structure disclosed by BYMA teaches the base portion with lofted and compacted regions of the present application; the thicker portions of the integral structure equate to the lofted regions of the present application and the thinner or compressed portions equate to the compacted regions of the present invention. With regards to claims 3 and 4, it is noted that Figure 3 shows a contoured headliner and that the thicker edge portions 26a and 26b are equated to the integral lofted perimeter region of claim 4. With regards to claim 11, it is noted that the claimed angled regions can be produced by the molding process taught by BYMA. With regards to claims 5-7, it is noted that BYMA contrasts their invention of an integrated structure with the conventional structures in the art that use additional/separate

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energy management elements to the structure to provide different levels of energy management. (Refer to Column 4, lines 25-35). Therefore, the use of additional/separate elements is well known in the art of headliners.

However, BYMA fails to teach the use of a composite material that comprises mineral fibers and organic fibers.

BAKHSHI et al. discloses a method for manufacturing a mineral fiber product which includes the step of directing fibers of polymeric material toward a stream of mineral fibers into entanglement with the mineral fibers and applying heat to the polymer fibers so that some of them become softened to the extent that they lose their fibrous form and become attached to the mineral fibers as nonfibrous particles. The reference further discloses that the product made by the method of their invention produces an insulation product having a greater degree of flexibility and handleability than typical insulation products. (Column 2, lines 18-48) Further, the reference teaches the use of PET (polyethylene terephthalate) and that the mineral fibers are glass fibers. (Refer to Column 3, line 55 and Column 4, lines 66-67)

Since both BYMA and BAKHSHI are directed to insulation materials, the purpose disclosed by BAKHSHI would have been recognized in the pertinent art of BYMA.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the headliner of BYMA and provide it with a composition that comprises mineral fibers and polymeric fibers with the motivation of producing an insulation product with a greater degree of flexibility and handleability than typical insulation products as disclosed by BAKHSHI above.

It is further noted with regards to claims 4, 5 and 27 that it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but

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only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

In re Hutchison, 69 USPQ 138.

11. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over BAKHSHI et al. and BYMA in further view of ERICKSON (WO 00/44561).

BAKHSHI et al. and BYMA fail to teach the use of a fabric layer and foam.

ERICKSON discloses a thermoformable laminate, which can be shaped and compressed in a thermoforming tool to form a vehicle headliner with at least one integral impact absorption area. (Page 2, lines 8-10) The thermoformable laminate includes a rigid thermoplastic foam sheet 12 and a fiber-reinforcing layer (layers 14 and 15) adhered to each of two opposite faces of the rigid thermoplastic sheet. (Page 2, lines 22-23) The reference teaches that headliner 20 is prepared by heating the thermoformable laminate 10 to the thermoforming softening temperature range of the rigid thermoplastic foam sheet 12, and shaping and compressing the laminate in a tool having a cavity of varying thickness, to form a vehicle headliner 20 having variable thickness, including a major portion, such as portion 22, which is relatively thin, dense and highly compressed, as compared with the relatively thin, lower density, lightly compressed or noncompressed impact absorption areas 24, 25. (Page 3, lines 12-20)

The reference further teaches that the fiber reinforcing layers 14, 15 may be comprised of reinforcing glass fibers or reinforcing thermoplastic fibers, which are adhesively bonded to each of two opposite faces of rigid thermoplastic foam sheet 12. Examples of suitable thermoplastic fibers include polypropylene fibers, nylon fibers and polyethylene terephthalate (PET) fibers. The reinforcing fibers may be adhered to the foam sheet in the form of a nonwoven fabric or scrim by a thermoplastic hot-melt adhesive. An upholstery fabric 16 is adhesively bonded to fiber reinforcing layer 15, the upholstery layer 16 is preferably a pliable composite comprising

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an outer, exposed fabric 17, which is adhered to a flexible foam backing layer 18. (Page 5, lines 4-28)

Since ERICKSON, BAHKSHI et al. and BYMA, are directed to insulation materials, the purpose disclosed by ERICKSON would have been recognized in the pertinent art of BAHKSHI et al. and BYMA.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the liner and provide with a fabric layer and a foam layer with the motivation of providing some rigidity to the liner as disclosed by ERICKSON (page 3, lines 22-34 through page 4, lines 1-5), further the fabric is used to provide the liner with an aesthetically exposed outer layer as it is used in the ERICKSON reference. (Refer to teachings on Page 5, lines 25-28)

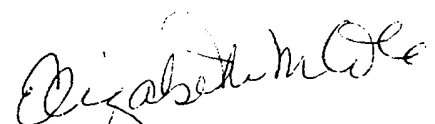
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


NLT

September 5, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER